

tity of field ice. March 2d, in 43° 45' N., 48° 40' W., s. s. "Lake Champlain" passed large quantities of field ice and several icebergs; 7th and 8th, s. s. "Oder" between 45° 09' N., 48° 50' W., and 44° 52' N., 50° 03' W., passed numerous icebergs and floating ice. Steamer "Otranto" reported: March 6th, (no position given) at 2 p. m., passed an iceberg of great size and from that time up to 10.30 p. m., passed 16 others and field ice extending as far as the eye could reach; 10th, in 47° 00' N., 46° 30' W., s. s. "Thornholme," passed a large iceberg, also ice-field five or six miles long, also, on 11th, at 6 a. m., passed two very large icebergs, one of which was estimated to be four miles in length, and was very high; 18th, in 44° 04' N., 47° 53' W., s. s. "Salier," passed several large icebergs; 21st, Bark "Fremad," two days sail from New York, passed through large field of ice. The s. s. "Newfoundland" at St. Johns, N. F., March 28th, reports two vessels jammed in the ice, thirty miles sw., of Cape Pine, also heavy ice everywhere on the coast; 14th, in 43° 29' N., 49° 05' W., s. s. "Batavia," passed an iceberg; 10th, in 42° 30' N., 50° 00' W., s. s. "City of Brussels" passed a small iceberg; 13th, in 44° 39' N., 47° 36' W., s. s. "Devonia," passed several small icebergs; 12th, in 44° 09' N., 49° 12' W., s. s. "Donau," passed two icebergs; 14th, in 42° 31' N., 50° 05' W., s. s. "Erin," passed an immense iceberg; 17th, in 43° 35' N., 49° 10' W., s. s. "Glamorgan," passed two large icebergs, from three hundred to five hundred feet long and one hundred feet high; 11th, in 45° 58' N., 48° 40' W., s. s. "Iberian" passed through large quantities of field ice, and saw several large icebergs; 15th, in 43° 47' N., 49° 60' W., s. s. "Lake Manitoba" passed three icebergs. March 3d, bark "Plymouth" in 43° 40' N., 50° 25' W., passed through about 20 miles of field ice and saw several icebergs; 19th, in 46° 30' N., 47° 30' W., s. s. "Limosa" passed through heavy field ice. The whaling steamer "Esquimaux" arrived at St. Johns, from Dundee, February 28th, and reports having been 13 days among vast fields of ice that stretched s. e. and s. over two hundred miles from the Newfoundland coast. The pack caught her tightly and she remained in it until she drifted up to St. Johns' Harbor. At last accounts, five steam whalers are visible from Cape Spear, locked in the ice and drifting helplessly southward. Between Cape Race and Cape Bonavista there are now driving southward, no less than a hundred and fifty icebergs, and their rate is about 2½ miles per hour.

### TEMPERATURE OF THE AIR.

The distribution of mean atmospheric temperature over the United States and Canada for the month of March, 1882, is exhibited on chart ii, by the dotted lines in black. The table of mean comparative temperatures, in the lower left-hand corner of the chart, shows, in the first column, the average temperature for the month from the various districts, as determined from observations taken at Signal Service stations during the month of March of previous years; the second column shows the mean temperature for the current month; the third column shows the departure of the mean temperature of the current month from the mean of several years. The temperature is above the normal in all districts east of the Rocky mountain range; and below the normal in the districts on the Pacific coast, except in Oregon and Washington Territory, where it has averaged about 8° above the mean. It has ranged from 4° to 5° above the normal in the southern states, Ohio and Missouri valleys; about 3° above in the middle states and lake region; about 5° below in the middle plateau region; and about 1° below in California.

### DEVIATIONS FROM MEAN TEMPERATURE.

Under this heading departures exhibited by reports from the regular Signal Service stations are shown in the table of comparative temperatures on the left-hand side of chart ii. The following items of importance, in connection with this subject, are reported by voluntary observers:

*Connecticut*: Southington, mean temperature varies less than

1° from the average of past 12 years and has not been marked by extremes.

*Illinois*: Riley, mean temperature 33°.8 or 3°.8 above the average of past 21 years; higher mean temperatures occurred in 1868, '71, '78 and '79.

*Indiana*: Vevay, mean temperature 50°.27 or 7°.47 above the average for past 17 years. Mean temperature of winter, beginning with December, 1881, and ending February 28th, 1882, is 41°.23 or 7°.9 above the average winter mean for past 17 years.

*Iowa*: Clinton, mean temperature slightly above the average.

*Kansas*: Lawrence, mean temperature 46°.90 or about 5°.42 above the average of past 14 years; mean temperature for the month at 7 a. m., 40°: at 2 p. m., 55°.93; at 9 p. m. 45°.85. Yates Centre, mean temperature 46°.5 or 8°.4 above the average of past 2 years. Wellington, mean temperature 47°.4 or 3°.3 above the average of the past 3 years and 2°.2 below the mean of March, 1879.

*Maine*: Gardiner, mean temperature 28°.91 or 0°.91 below the average of past 56 years. Mean temperature of winter (from December, 1881, to March, 1882, both inclusive) is 24°.35 or 1°.24 above the average of the past 46 years. The lowest temperature of the past winter—27° occurred January 25; the lowest on record at this place—40°, occurred in January, 1857; the highest minimum temperature for any winter during that period—12°, occurred in January, 1845. During the past winter the temperature fell below zero on 21 dates; during the winter of 1855-6, on 59 dates, and during the winter of 1841-2, on only 10 dates.

*Maryland*: Fallston, mean temperature 41°.52 or 2°.67 above the average of past 11 years; during that period the highest mean 46°.20 occurred in 1871, and the lowest 32°.90 occurred in 1872.

*Michigan*: Thornville, mean temperature 35°.9 or about 5° above the average of the past 15 years.

*Missouri*: St. Louis, Missouri Weather Service reports mean temperature 47°.6 or about 4° above the average of the past 45 years. During that period the mean of March, 1882, has been exceeded 13 times; the highest mean 56°.5 occurred in 1842; the lowest 27°.5 in 1843; Proteau, mean temperature 55.45, the highest since 1860.

*New Hampshire*: Contoocookville, mean temperature 31°.5 is about the average for March for the past 12 years.

*New York*: Waterburg, mean temperature, 33.1 which is the highest that has occurred during the past 11 years with the exception of March, 1878, mean 37°.4; North Volney, mean temperature 51°.59 or 2°.76 above the average of past 14 years. During that period the highest monthly mean 37°.39 occurred in 1878; lowest 21°.15 occurred in 1872.

*Ohio*: North Lewisburg, mean temperature 42.0 or 3°.3 above the average of 51 years.

*Pennsylvania*: Wellsboro, mean temperature much higher than for any previous year since 1856.

*Virginia*: Wytheville, mean temperature 45°.6 or 3° above the average of past 18 years.

*West Virginia*: Helvetia, mean temperature 44.68 or 4°.67 above the average of the past 6 years.

### RANGES OF TEMPERATURE AT SIGNAL SERVICE STATIONS.

Monthly ranges of temperature during the month of March varied from 19° to 89° at stations east of the Rocky mountains, and from 32° to 75° at stations on the Pacific coast. The smallest ranges are: Key West, 19°; Port Eads, 23°; Punta Rassa, 27°; New Orleans, 28°; San Francisco, 32°; Mobile and Hatteras 33°; Delaware Breakwater, 34°; Brownsville, Tex., 37; San Diego, 39°. The largest: Ft. Buford, Dak., and Ft. Shaw, Mont., 89°; Ft. Benton, Mont., 88°; Bismarck, Dak., 87°; Ft. Bennett, Dak., 84°; Huron, Dak., 81°; Ft. Assinaboine, Mont., and Yankton, 80°; Ft. Missoula, Mont., and Ft. Washakie, Wyo., 78°; Ft. Keogh, Mont., 76°; Ft. Custer, Mont., and Eagle Rock, Idaho, 75°. The daily ranges varied in the different districts as follows: New Eng-

Table of Comparative Minimum Temperatures for the Month of March.

State or Territory.	Minimum for March, 1882, Signal Service.		Lowest since Signal Service stations were opened—3 to 11 years.			Lowest from any other source.			
	Station	Temp.	Station	Temp.	Year.	Place	Temp.	Year.	Length of Record.
Alabama	Montgomery	43	Montgomery	26	1873	Huntsville	11		9 years.
Arizona	Prescott	13	Prescott	-8	1876	Fort Canby	-1		12 "
Arkansas	Little Rock	39	Little Rock	32	'8 & '81	Fort Smith	-3		22 "
California	Campo	15	Campo	19	1880	Fort Bidwell	0		11 "
Colorado	Pike's Peak	-24.5	Pike's Peak	-29	1875	Fort Crook	2		12 "
Do	West Las Animas	6	Colorado Springs	-4	1875	Fort Garland	-10	1875	29 "
Connecticut	New Haven	13	New Haven	6	'75 & '76	Fort Lyon	-10	1880	22 "
Do						Pagosa Springs	-20	1881	1 "
Dakota	Fort Stevenson	-23	Pennington	-31	1880	Cochran	-10		10 "
Do			Fort Stevenson	-28	1879	New Haven	-9		76 "
Delaware	Delaware Breakwater	28	Delaware Breakwater	25	1880	Fort Abernethy	-40		19 "
Do						Fort Buford	-40	'67 & '70	16 "
Dist. of Columbia	Washington	23	Washington	4	1873	Fort Delaware	6		45 "
Florida	Cedar Keys, Jacksonville and Pensacola	47	Jacksonville	31	'73 & '76	Milford	6	1877	4 "
Do			Lake Village	25	1873	Washington	-6		49 "
Georgia	Atlanta	34	Augusta	22	1873	Fort Barrancas	28		61 "
Do						Fort King	27		10 "
Idaho	Eagle Rock	-16	Boise City	10	1879	Atlanta	12		4 "
Illinois	Champaign	21	Chicago	1	1873	McPherson Barracks	12		6 "
Do						Fort Hall	-1		5 "
Do						Fort Armstrong	-14		9 "
Indiana	Indianapolis	24	Indianapolis	2	1873	Rock Island Arsenal	-14		11 "
Do						Belvedere	-20	1877	5 "
Indian Territory	Fort Supply	17	Fort Gibson	10	1878	S. Island	0		15 "
Do						Kokomo	-10	1875	1 "
Iowa	Des Moines and Davenport	10	Dubuque	-10	1875	Fort Gibson	7		55 "
Do			Keokuk	-10	1873	Camp Supply	-2	1876	2 "
Kansas	Dodge City	14	Dodge City	-8	1880	Albany	-25		10 "
Do						Valley	-20	1880	7 "
Kentucky	Louisville	31	Louisville	3	1873	Fort Riley	-20		21 "
Do			Lexington	-1	1873	Fort Leavenworth	-9		52 "
Louisiana	Shreveport	41	Shreveport	26	1876	Newport Barracks	3		29 "
Do									
Maine	Eastport	10	Eastport	-1	'75 & '81	Fort Jesup	16		23 "
Do						Baton Rouge	26		58 "
Maryland	Baltimore	26	Baltimore	5	1873	Gardiner	-10		42 "
Massachusetts	Boston and Springfield	15	Springfield	-1	1875	Brunswick	-19		53 "
Do						Fort McHenry	0		52 "
Michigan	Alpena	0	Escanaba	-0	1875	Williamstown	-1		62 "
Do						BillERICA	-14	1875	11 "
Minnesota	St. Vincent	-25	Brainerd	-32	1873	Fort Brady	-32	1875	60 "
Do						Ontonagon	-2		11 "
Mississippi	Vicksburg	43	Vicksburg	27	1876	Fort Ripley	-37		18 "
Missouri	Springfield	24	St. Louis	3	'73 & '74	Minneapolis	-27		12 "
Do						Columbus	20		10 "
Montana	Fort Shaw	-18	Fort Benton	-42	1876	Harrisonville	-12		6 "
Do						St. Louis	-6		39 "
Nebraska	Omaha	5	North Platte	-21	1880	Fort Ellis	-36		13 "
Do						Fort Benson	-42	1876	12 "
Nevada	Winnemucca	-3	Winnemucca	2	1880	Glendale	0	1868	2 "
New Hampshire	Mount Washington	-19.5	Mount Washington	-31	1874	Bellevue	-15		11 "
Do						Fort Harker	-8	1881	13 "
New Jersey	Sandy Hook and Barnegat	20	Cape May	9	1873	Camp McGarry	-6		3 "
Do			Squad Beach	9	1875	Dartmouth College	-23		19 "
New Mexico	Santa Fe	9	Santa Fe	0	1880	Stratford	-22		11 "
New York	Albany	15	Albany	-4	1875	Patterson	0		9 "
Do			Malone	-4	1876	Newark	2		22 "
North Carolina	Charlotte	30	Kittyhawk	-10	1876	Fort Union	-12	1882	31 "
Do			Willington	-20	1873	Madison Barracks	-36		56 "
Ohio	Columbus, Cleveland & Sandusky	22	Cleveland	-2	1873	Sackett's Harbor	-34		5 "
Do						Franklin	6	1876	5 "
Oregon	Umatilla	26	Umatilla	12	1880	Fort Johnson	14		58 "
Do						Granville	-14		16 "
Pennsylvania	Erie	21	Erie	2	1877	College Hill	-10		64 "
Do						Camp H. H. H. H.	-3		6 "
Rhode Island	Newport	18	Newport	9	1876	Fort Klamath	-6	1880	6 "
South Carolina	Charleston	40	Charleston	25	1873	Pennsylvania	-14		6 "
Do						Carlisle Barracks	-6		37 "
Tennessee	Knoxville	29	Knoxville	6	1873	Fort Adams	-6		40 "
Do						Fort Moultrie	25		38 "
Texas	Fort Elliott	18	Fort Elliott	-2	1880	Edgefield	20	1876	2 "
Do						Charleston	31		105 "
Utah	Salt Lake City	11	Salt Lake City	4	1874	Glenwood Cottage	11		11 "
Do						Humboldt	-6	1876	2 "
Vermont	Burlington	4	Burlington	-4	1873	Fort Davis	9		23 "
Do						Fort Griffin	9	1876	7 "
Virginia	Fort Myer	12	Wytheville	-1	1873	Fort Crittenden	-2		3 "
Do						Conville	-20	1880	6 "
Washington Ty	Spokane Falls	7	Spokane Falls	7	1882	Endicott	-27		5 "
West Virginia	Morgantown	22	Morgantown	0.5	1873	Lunenburg	-23		17 "
Do						Fortress Monroe	13		57 "
Wisconsin	La Crosse	10	La Crosse	-23	1873	Snowville	0		20 "
Do						Fort Colville	-20		6 "
Wyoming	Fort Washakie	-3	Cheyenne	-17	1880	Weston	2	1876	3 "
Do						Heivelt	-24	1877	5 "
						Snake River City	-23		3 "
						Fort Crawford	-28		20 "
						Fort Ridgely	-28		4 "
						Fort Sanders	-28	1875	4 "

land, Mt. Washington, 36° on 28th; Burlington, 29°, 28th; Eastern Gulf states, 20°, 31st; Vicksburg, 25°, 29th; Montgomery, 28°, 2d. Western Gulf states, Mason, Tex., 39°, Boston, 28°, 20th; New London, 27°, 24th. Middle Atlantic states, New York, 24°, 19th; Cape May, 28°, 29th; Albany, 39th; San Antonio, Tex., 37°, 10th; Ft. Gibson, 34°, 1st; 22°, 18th; Washington, 30°, 26th; Norfolk, 31°, 26th. South Atlantic states, Augusta, 35°, 3d; Kittyhawk, 33°, 30th; Charleston, 32°, 3d; Savannah, 28°, 24th. Florida peninsula, Key West, 13°, 10th; Punta Rassa, 23°, 2d; Cedar Keys, 24°, 23d. Denison, Tex., 33°, 28th; Indianola, 23°, 9th; Galveston, 16°, 9th, 29th. Ohio valley and Tennessee, Knoxville, 35°, 2d; Louisville, 30°, 27th; Nashville, 31°, 29th; Columbus, 29°, 15th, 26th; Memphis, 29°, 25th; Indianapolis,

28°, 9th, 23d. Lower lake region, Rochester and Cleveland, 33°, 29th; Sandusky, 30°, 29th; Oswego, 28°, 29th. Upper lake region, Escanaba, 33°, 23d; Alpena and Port Huron, 32°, 23d; Duluth, 30° on 24th; Grand Haven, 20°, 27th. Upper Mississippi valley, Des Moines, 41°, 25th; Keokuk, 34°, 25th; La Crosse and St. Paul, 31°, 31st. Missouri valley, Yankton, 49°, 22d; Ft. Bennett, 50°, 31st; Omaha, 38°, 22d, 25th; Leavenworth, 35°, 14th. Extreme northwest, Ft. Buford, 49°, 7th; Bismarck, 50°, 27th; Moorhead, 42°, 24th. Northern slope, Cheyenne, 39°, 19th; North Platte, 42°, 24th; Ft. Keogh, 44°, 21st, 30th. Middle slope, Pike's Peak, 25°, 21st; Ft. Elliott, 42°, 2d; Dodge City, 46°, 22d; Denver, 39°, 24th. Southern slope, Concho and Ft. McKavett, 41°, 30th; Stockton, 46°, 5th; Ft. Griffin, 44°, 28th; Henrietta, 34°, 23th. Northern plateau, Umatilla, 38°, 31st; Eagle Rock, 39°, 22d; Ft. Missoula, 43°, 31st. Middle plateau, Winnemucca, 36°, 31st; Pioche, 32°, 31st; Salt Lake City, 30°, 31st. Southern plateau, Prescott, 50°, 22d; Phoenix, 47°, 21st; Tucson, 44°, 31st; La Mesilla, 50°, 2nd; Santa Fe, 32°, 21st; Silver City, 44°, 10th. North Pacific coast region, Olympia, 25°, 12th; Portland, 31°, 30th; Roseburg, 37°, 30th. Middle Pacific coast region, San Francisco, 21°, 27th; Sacramento, 26°, 31st; Red Bluff, 33°, 22nd. South Pacific coast region, San Diego, 30°, 23d; Campo, 50°, 23d; Yuma, 39°, 29th.

## FROSTS.

In the various districts they were reported on the following dates: New England, 3d, 5th, 7th to 27th, 29th, 31st; Middle Atlantic states, 3d to 9th, 11th, 13th to 20th, 22d to 26th, 28th, 29th, 31st; South Atlantic states, 11th, 14th to 17th, 23d, 25th, 26th, 29th; East Gulf states, 11th, 14th, 22d, 23d, 29th; West Gulf states, 1st, 6th to 11th, 13th, 21st to 24th, 27th, 28th; Rio Grande valley, 9th, 10th; Ohio valley and Tennessee, 1st, 2d, 4th to 8th, 10th, 11th, 13th to 17th, 21st to 26th, 28th to 31st; lower lake region, 2d to 26th, 28th to 31st; upper lake region, 1st to 31st; extreme northwest, 1st to 31st, upper Mississippi valley, 1st, 2d, 3d, 5th to 15th, 19th to 25th, 27th to 31st; Missouri valley, 1st to 16th, 19th, 21st to 24th, 26th, 28th to 31st; northern slope, 1st to 13th, 15th to 26th, 29th; middle slope, 1st to 30th; southern slope, 7th to 10th; southern plateau, 1st to 31st; middle plateau, 1st to 24th, 26th, 27th, 31st; northern plateau, 1st to 7th, 9th to 12th, 16th to 21st; north Pacific coast region, 1st, 2d to 13th, 18th to 21st, 23d; middle Pacific coast region, 3d, 4th, 9th, 19th to 23d; south Pacific coast region, 1st, 4th to 8th, 10th, 15th, 17th, 18th, 20th to 23d. Frosts injurious to vegetation were reported as follows: Charlotte, N. C., 23d, peas entirely killed; peach buds and wheat injured. 25th, further injury to wheat and fruit by frost. Charleston, S. C., on 23d, light frost damaging strawberries and early vegetation. Sacramento on 20th, frost killing tender vegetation. Coleman City, Tex., 8th, all kinds of young plants and the buds of fruit trees were frost bitten. Henrietta, Tex., 9th, peach crop much injured by severe weather of past two days.

## ICE.

Regarding its formation in the northern sections, this subject is considered elsewhere in THE REVIEW, under the head of "Ice in Rivers and Harbors." The following are exceptional cases of its formation in the southern sections of the country:

Augusta, Ga., 23d; Mason, Texas, 7th and 8th; Indianola, 9th, 10th; Fort Apache, Arizona, 6th; ice formed during night, an unusual occurrence for this season at this place; Red Bluff, 20th, formed during night on quiet water; Ashwood, Tenn., 11th, 14th, 23d, 25th; Austin, Tenn., 23d, 25th; Murfreesboro, Tenn., 14th, 23d, 25th; Coleman City, Texas, 7th.

## LOW TEMPERATURES.

Ft. Stevenson, Dak., 20th, worst blizzard of whole winter; 21st, blizzard still raging; Eagle Rock, Idaho, 6th, coldest weather ever experienced here at this season; 7th, stock men complain of severe losses on account of severe cold weather.

Table of Maximum and Minimum Temperatures for March, 1882.

State or Territory.	Signal Service.			U. S. Army Post Surgeons or Voluntary Observers.		
	Station.	Max.	Min.	Station.	Max.	Min.
Alabama.....	Montgomery.....	9	42	Auburn.....	0	33
Arizona.....	Yuma.....	95		Maricopa.....	101	
Do.....	Prescott.....		13	Mount Ida.....	84	29
Arkansas.....	Little Rock.....	82	39	Antioch.....	98	
California.....	Los Angeles.....	89		Summit.....		4
Do.....	San Francisco.....	77	16	Pagosa Springs.....	50	8
Colorado.....	West Los Angeles.....	77	16			
Do.....	Pike's Peak.....	33	-24.5	Southington.....		11
Connecticut.....	New Haven.....	50	13			
Do.....	New London.....	59		Fort Randall.....	85	
Dakota.....	Yankton.....	80		Pembina.....		-24
Do.....	Ft. Ste. Anson.....		23			
Delaware.....	Breakwater.....	49	28			
District of Columbia.....	Washington.....	71	23	Fort Barrancas.....		41
Florida.....	Jacksonville.....	86				
Do.....	Cedar Keys, Jacksonville and Pensacola.....		47			
Georgia.....	Augusta.....	89				
Do.....	Atlanta.....		34			
Idaho.....	Ft. Lapwai.....	80				
Do.....	Eagle Rock.....		-16	Anna.....	78	
Illinois.....	Calro and Springfield.....	73		Geneseo and Morrison.....		8
Do.....	Champaign.....		21	Lacona.....	78	
Indiana.....	Indianapolis.....	7	24	Spice land.....		21
Do.....						
Indian Territory.....	Fort Supply.....	85	17			
Do.....	Des Moines.....	74	10	Logan.....	78	4
Iowa.....	Davenport.....		10			
Kansas.....	Dodge City.....	81	14	Manhattan and Wellington.....		12
Do.....				Bowling Green.....	79	30
Kentucky.....	Louisville.....	75	31			
Louisiana.....	Shreveport.....	90	41	Orono.....		-2.7
Maine.....	Portland.....	54				
Do.....	Eastport.....		10	Cumberland.....	72	
Maryland.....	Baltimore.....	69	29	Deer Park.....		13
Do.....				Somerset.....	63	
Massachusetts.....	Boston.....	61	13	South Lee.....		3
Do.....	Springfield.....		15	Fort Brady.....		-12
Michigan.....	Port Huron.....	64				
Do.....	Alpena.....		0	New Ulm.....	61	
Minnesota.....	St. Paul.....	58				
Do.....	St. Vincent.....		-25	Fayette.....	86	41
Mississippi.....	Vicksburg.....	84	43	Protem.....	86	
Missouri.....	Saint Louis.....	79		Corning.....		9
Do.....	Springfield.....		24	Ft. Shaw.....		-19
Montana.....	Forts Custer and Keogh.....	76				
Do.....	Fort Shaw.....		-18			
Nebraska.....	Omaha.....	77	5	Lincoln.....	89	
Do.....				Genot.....		3
Nevada.....	Winnemucca.....	72	3	Humboldt.....	82	
Do.....				Elko.....		-7
New Hampshire.....	Mt. Washington.....	37	-19.6	Auburn.....	58	10
New Jersey.....	Atlantic City.....	66		Freehold.....		16
Do.....	Sandy Hook and Barnegat.....		20			
New Mexico.....	La Mesilla.....	87		Ft. Union.....		-12
Do.....	Santa Fe.....		9			
New York.....	New York City.....	67		Johnstown.....		2
Do.....	Oswego.....		15	Murphy.....		27
North Carolina.....	Wilmington.....	82				
Do.....	Charlotte.....		30	Jacksonburg.....	72	
Ohio.....	Cincinnati.....	70		Ruggles and New Athens.....		18
Do.....	Cleveland, Columbus and Sandusky.....		22	Dyberry.....		8
Oregon.....	Umatilla.....	77	26			
Pennsylvania.....	Pittsburg.....	75		Stateburg.....	89	36
Do.....	Erft.....		21			
Rhode Island.....	Newport.....	57	18			
South Carolina.....	Charleston.....	85	40			
Tennessee.....	Knoxville.....	83	29			
Do.....	Chattanooga.....	83				
Texas.....	Rio Grande.....	96				
Do.....	Fort Elliott.....		18			
Utah.....	Salt Lake City.....	68	11	Coalville.....		0
Vermont.....	Burlington.....	54	4	Lunenburg.....		-7
Virginia.....	Cape Henry.....	76		Snowville.....	59	20
Do.....	Fort Myer.....		22	Wytheville.....		20
Washington Ter.....	Dayton.....	77				
Do.....	Spokane Falls.....		7			
West Virginia.....	Morgantown.....	72	22	Helvetia.....	76	20
Wisconsin.....	Madison and Milwaukee.....	62		Beloit.....	67	
Do.....				Ashland.....		-2
Do.....	La Crosse.....		10			
Wyoming.....	Fort Washakie.....	74	-3	Ft. Bridger.....		-16

## PRECIPITATION.

The distribution of rainfall over the United States and Canada for March, 1882, as determined from observations taken at over five hundred stations, is exhibited on chart iii. The table at the left hand corner of this chart shows the average monthly rainfall, determined from the records of the Signal Service stations in the several districts, and the excess or deficiency of rainfall as compared with the average for many years. Exam-